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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,670	12/19/2000	Aalbert Stek	PHN 17, 817	7059

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EXAMINER

WILLIAMS, LAWRENCE B

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/741,670

Applicant(s)

STEK ET AL.

Examiner

Lawrence B Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12 is/are rejected.
- 7) ☒ Claim(s) 9-11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because:

a.) In Figs. 1, 5, 6, the elements depicted need to contain a text label as referenced in the specification. It is office policy to request from applicants that submitted figures contain both text and numerical labels to allow individuals viewing each figure to be able to determine the designation of each element in the figure without having to go into the specifications.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The abstract of the disclosure is objected to because line 9 contains form and legal phraseology; "**said**". Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "**means**" and "**said**," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

*Claim Objections*

5. Claim 5 is objected to because of the following informalities:

a.) Examiner suggests applicant replace the C0 with C<sub>0</sub> in line 3.

Appropriate correction is required.

6. Claim 10 is objected to because of the following informalities:

a.) Examiner suggests applicant replace the word **claims** with **claim** in line 1.

Appropriate correction is required.

7. Claim 12 is objected to because of the following informalities:

a.) Examiner suggests applicant replace the word **claims** with **claim** in line 1.

Appropriate correction is required.

8. Claim 12 is objected to because of the following informalities: Claim 12 recites the limitation "the first control signal" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (EP 0 332 079 A2).

(1) With regard to claim 1, Tanaka discloses in Figs. 1-4, an arrangement for receiving a digital signal from a transmission medium, the arrangement comprising: input means (1) for receiving a signal from the transmission medium, asynchronous sampling means (2) for sampling an analog signal so as to obtain a first signal having asynchronous samples, variable equalizer means (3) having an input coupled to the input means, a control signal input for receiving a control signal, and an output for supplying an equalized signal, equalizer control signal generator means (5) having an input, and an output for supplying an equalizer control signal, which output is coupled to the control signal input of the equalizer means, signal detector means, having an input coupled to the output of the variable equalizer means, and an output for supplying the digital signal, the signal detector means (col. 3, lines 47-48) being adapted to detect the digital signal from the equalized signal, an output terminal coupled to the output of the signal detector means, for supplying the digital signal, characterized in that the input of the equalizer control signal generator means is adapted to receive a second signal having asynchronous samples, the equalizer control signal generator means comprises detection means

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for detecting the instant at which the second signal crosses a predetermined signal value, so as to obtain a detection signal, and means for, in response to said detection signal, deriving the equalizer control signal from at least one asynchronous sample value of the second signal at either side of the instant at which the second signal crosses said predetermined signal value, said equalizer control signal being derived from said at least two samples by means of an operation equivalent to arithmetically combining said at least two asynchronous sample values (col. 5, line 20- col. 6, line 35).

(2) With regard to claim 2, Tanaka also discloses in Figs. 1-4, an arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means (2) is coupled to the input means, and an output of the asynchronous sampling means is coupled to the input of the variable equalizer means (3), and the input of the equalizer control signal generator means is coupled to the output of the variable equalizer means, for receiving said second signal having asynchronous samples.

(3) With regard to claim 3, Tanaka also discloses in Figs. 1-4, an arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means (2) is coupled to the input means (1), and an output of the asynchronous sampling means is coupled to the input of the variable equalizer means (3) and the input of the equalizer control signal generator means (dotted line), for receiving said second signal having asynchronous samples.

(4) With regard to claim 4, Tanaka also discloses in Figs. 1-4, an arrangement as claimed in claim 2, characterized in that, the variable equalizer means (3) comprises a FIR filter (col. 4, lines 24-28).

(5) With regard to claim 5, Tanaka also discloses arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function  $H(z) = C_0 + 2C_1 z^{-1} + C_0 z^{-2}$ ,  $C_0$  and  $C_1$ , being variables which comply with  $C_0 = 1/2 - C_1$  and which variables have a relationship with the equalizer control signal (col. 4, lines 24-58).

(6) With regard to claim 6, Tanaka also discloses an arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function  $H(z) = 0 + z^{-1} - 0 z^{-2}$ , 0 being a variable having a relationship with the equalizer control signal (col. 4, lines 24-58).

(7) With regard to claim 7, Tanaka also discloses an arrangement as claimed in claim 4, characterized in that the FIR filter is a 3-tap FIR filter preferably having a transfer function:  $H(z) = (C_0 + 0) + 2C_1 z^{-1} + (C_0 - 0) z^{-2}$ , where  $C_0$ ,  $C_1$  and  $A$  are variables having a relationship with the equalizer control signal which complies with  $C_0 = 1/2 - C_1$  (col. 4, lines 24-58).

(8) With regard to claim 8, Tanaka also discloses in Fig. 3, an arrangement as claimed in claim 1, characterized in that an input of the asynchronous sampling means is coupled to the output of the variable equalizer means, and the input of the equalizer control signal generator means is coupled to an output of the asynchronous sampling means, for receiving said second signal having asynchronous samples.

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka (EP 0 332 079 A2) as applied to claim 1 above in view of Haong et al. (US Patent 6,549,087 B1).

As noted above, Tanaka discloses all limitations of claim 1. Tanaka does not however disclose the equalizer control signal generator means comprises a look-up table in order to obtain the equalizer control signal in response to the first control signal.

However, Hoang et al. teaches the equalizer control signal generator means comprises a look-up table in order to obtain the equalizer control signal in response to the first control signal (col. 5, lines 10-11).

One skilled in the art would have clearly recognized that an equalizer control signal generator means comprises a look-up table in order to obtain the equalizer control signal in response to the first control signal is a well-known technique introduced in many references. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to apply the method as taught by Haong et al. to modify the invention of Tanaka as a method of further optimizing the characteristics of the equalizer.

#### ***Allowable Subject Matter***

13. Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



*Conclusion*


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence B Williams whose telephone number is 703-305-6969. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence B. Williams

lbw  
March 23, 2004

  
**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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